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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,795	02/18/2004	Keiichi Tanaka	1248-0694P	9620
2292	7590	08/26/2005		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER BARRECA, NICOLE M	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/779,795

Applicant(s)

TANAKA ET AL.

Examiner

Nicole M. Barreca

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 11-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/18/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicant's election without traverse of Group I, claims 1-10 in the reply filed on 6/10/05 is acknowledged.
2. Claims 11-46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/10/05.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuyama (US 2001/0007733).
5. A color filter is manufactured. On the main surface of substrate SUB2 the pattern of the black matrix (BM) is formed, corresponding to the first film. As can be seen in Figure 11 (a) the first film is tapered and therefore includes a gap width regulating section by which the width of the gap region is narrowed. A photosensitive resin is coated and exposed through the substrate to UV radiation using the first film as a mask. This formed dyed substrate layer DP whose height is lower than the height of the BM.

Art Unit: 1756

INK (R), INK (G), INK (B) is supplied to the ink reservoirs POD by an ink jet method, corresponding to the second film material. Ink is raised on the dyed substrate layer making use of the surface tension of the ink. This is realized by using the BM as partition walls and making the height of the DP lower. The ink is diffused into the dyed substrate layers DP by a suitable heat treatment. See specifically [0159]-[0169] and Figures 11(a)-12(d).

6. Claims 1-3, 6-10 rejected under 35 U.S.C. 102(e) as being anticipated by Kiguchi (US 2003/0210361).

7. Color filter is manufactured. Transparent substrate 2 is formed. A chromium film is formed and patterned using a photoresist exposed UV rays and etching to form shading layer (black matrix 3). Photosensitive resin film is deposited and exposed to form banks 14 which extend outward and cover the inside of the shading layer 3. Ink as a coloring material is jetted and applied to the color filter layer formation regions (pixel portions 13) from an ink jet head. Ink droplets are applied, dried and heated to form pixel portions 13 of R, G and B. See specifically [0032]-[0043] and Figure 4.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama as applied to claim 1 above, and further in view of Nishida (US 6,864,034).

Art Unit: 1756

10. Matsuyama teaches forming the pattern of the black matrix (first film) using a black resin but is silent on using a thermal imaging processing a laser beam. Nishida teaches in the background of the invention that thermal imaging processes which used laser beams have been used for forming separation ribs for color filter and black matrices of liquid crystal display devices (col.1, 46-51). It would have been obvious to one of ordinary skill in the art to use thermal imaging with a laser beam to form the black matrix in the method of Matsuyama because Nishida teaches invention that thermal imaging processes which used laser beams have been used for forming separation ribs for color filter and black matrices of liquid crystal display devices.

#### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole M. Barreca whose telephone number is 571-272-1379. The examiner can normally be reached on Monday-Thursday (9AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1756

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nicole M Barreca  
Primary Examiner  
Art Unit 1756

A handwritten signature in black ink, appearing to read "Nicole M Barreca", written in a cursive style.

8/21/05